

Human PLSCR1

```

1 cgagcgccag cgcggggaacc gggaaaagga aaccgtgttg tgtacgtaag attcaggaaa
61 cgaaaccagg agccgcgggt gttggcgcaa aggttactcc cagacccttt tccggctgac
121 ttctgagaag gttgcgcagc agctgtgccc gacagtctag aggcgcagaa gaggaagcca
181 tcgcctggcc ccggtctctc ggacctgtgc tcgctcgga gcggaaacag cggcagccag
241 agaactgttt taatcatgga caaacaaaac tcacagatga atgcttctca cccggaaaca
301 aacttgccag ttgggtatcc tcctcagtat ccaccgacag cattccaagg acctccagga
361 tatagtggct accctgggccc ccaggtcagc taccaccccc caccagccgg ccattcaggt
421 cctggccccg ctggctttcc tgtcccaaat cagccagtggt ataatcagcc agtatataat
481 cagccagttg gagctgcagg ggtaccatgg atgccagcgc cacagcctcc attaaactgt
541 ccacctggat tagaatattt aagtcagata gatcagatac tgataatgaa gcaaattgaa
601 cttctggaag ttttaacagg ttttgaaact aataacaaat atgaaattaa gaacagcttt
661 ggacagaggg tttactttgc agcgggaagat actgattgct gtacccgaaa ttgctgtggg
721 ccatctagac cttttacctt gaggattatt gataatatgg gtcaagaagt cataactctg
781 gagagaccac taagatgtag cagctgttgt tgtccctgct gccttcagga gatagaaatc
841 caagctcctc ctggtgtacc aataggttat gttattcaga cttggcacc atgtctacca
901 aagtttacaa ttcaaaatga gaaaagagag gatgtactaa aaataagtg tccatgtgtt
961 gtgtgcagct gttgtggaga tgttgatttt gagattaaat ctcttgatga acagtgtgtg
1021 gttggcaaaa tttccaagca ctggactgga attttgagag aggcatttac agacgctgat
1081 aactttggaa tccagttccc tttagacctt gatgttaaaa tgaaagctgt aatgattggg
1141 gcctgtttcc tcattgactt catgtttttt gaaagcactg gcagccagga acaaaaatca
1201 ggagtgtggg agtggattag tgaaagtctc ctcaggaaat ctgaagtctg tatattgatt
1261 gagactatct aaactcatac ctgtatgaat taagctgtaa ggcctgtagc tctggttgta
1321 tacttttgct tttcaaatta tagtttatct tctgtataac tgatttataa aggtttttgt
1381 acatttttta atactcattg tcaatttgag aaaaaggaca tatgagtttt tgcatttatt
1441 aatgaaactt cctttgaaaa actgctttga attatgatct ctgattcatt gtccatttta
1501 ctaccaataa ttaactaagg ccttattaat ttttatataa attatatctt gtccatttaa
1561 atctagttac aatttatttc atgcataaga gctaattgta ttttgcaaat gccatatatt
1621 caaaaaagct caaagataat tttctttact attatgttca aataatattc aatatgcata
1681 ttatctttta aaagttaaat gtttttttaa tcttcaagaa atcatgtctac acttaacttc
1741 tctagaagc taatctatac cataatattt tcatattcac aagatattaa attaccaatt

1801 ttcaaattat tgtagtaaa gaacaaaatg attctctccc aaagaaagac acattttaaa
1861 tactccttca ctctaaaact ctggtattat aacttttgaa agttaatatt tctacatgaa
1921 atgttttagct cttacactct atccttccca gaaaatggta attgagatta ctcagatatt
1981 aattaaatac aatatcatat atatatccac agagtataaa ctaaataat gatctattag
2041 attcaaatat ttgaaataaa aacttgattt ttttgt

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Predicted open reading frame:

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MDKQNSQMNASHPETNLPVGYPPQYPPTAFQGP PGYSGYPGPQVSYP PPPAGHSGPGPAG
FPVPNQPVYNQPVYNQPVGAAGVPWMPAPQPPLNCP PGLEYLSQIDQILIHQQIELLEVL
TGFETNNKYEIKNSFGQRVYFAAEDTDCCTRNC CGPSRPFTLRIIDNMGQEVITLERPLR
CSSCCCPCCLQEIEIQAPPGVPIGYVIQ TWHPCLPKFTIQNEKREDVLKISGPCVVCSCC
GDVDFEIKSLDEQCVVGKISKHWTGILREAF TADNFGIQFPLDLVKMKAVMIGACFLI
DFMFFESTGSQE QKSGVW

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FIGURE 1

Human PLSCR2

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1 ggccgaatgg agaatgaagc cttttcaaat tcacctccca gtgaaccacc ctcaaaatag
61 aagtgaatgt gaaaccacag atatttcatt aaaacatata tgaagataaa aacataacctc
121 aagcttcaca gatataggac ttctgagctg agaggacctc ccggacatat tgtctaccct
181 aagcaccagg ctggacacac tgggaaacag gctgaccacc tgggctccca ggccttctac
241 ccaggacgct agcatgacta cctagtccca cctgctggca cagctggcat tctgttcaa
301 aatcagccag gtagacctga aggggtacca tggatgccag caccaccacc accattaaac
361 tgtccgccag gattggaata cttaagtcag atagatatga tactaattca tcagcaaatt
421 gaacttctgg aagttctatt cagttttgaa agtagtaaca tgtatgaaat caagaacagc
481 tttgggcaga ggatttattt tgcagcagaa gatactaatt tctgtatccg aaattgctgt
541 gggcgggtcta gaccttttac cttgaggatt actgataatg tgggtcgaga agtcataact
601 ctggaaagac cactaagatg taactgttgt tgttgccctc gctgccttca ggagatagaa
661 atccaagctc ctcttggtgt accagtaggt tatgttactc agacctggca cccatgtcta
721 acaaagttta caattaaaaa tcagaaaaga gaggatgtac taaaaattag tgggtccatgt
781 atcgtgtgca gctgtattgc ggggtgtgat tttgagatta catctcttga tgaacaaatt
841 gtggttggca ggatttctaa gcactggctc gggtttttaa gagaggcatt tactgatgct
901 gacaactttg gaatccaatt ccctagagac cttgatgtta aaatgaaagc cgtgatgatt
961 ggtgcctggt tcctcattga ctacatgttt tttgaaagaa ctaggtaatg actggaatgt
1021 cagagtgtgg gagtggatta atgattccgg atctttggct aggcaaaatg aaactataac
1081 tgatctaaac ggttccttcc ttcttctact gtgcaaggaa gatgtaagga aaaactcgca
1141 cactatctgt ggaactcatt taaattcaaa tcctagataa acatttcgca ttgaatattt
1201 acatggagaa aaatcatcaa acatcaacaa ttatcaagtt aattaataaa aatactaggt
1261 attgc

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Predicted open reading frame:

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MPAPPPPLNCPPGLEYLSQLDMILIHQQIELLEVLFSFESSNMYEIKNSFGQRIYFAAED
TNFCIRNCCGRSRPFTLRITDNVGREVITLERPLRCNCCCPCLQEIEIQAPPGVPVGY
VTQTWHPCLTKFTIKNQKREDVLKISGPCIVCSCIAGVDFEITSLDEQIVVGRISKHWSG
FLREAFTDADNFGIQFPRDLVKMKAVMIGACFLIDYMFETER

```

FIGURE 2

Human PLSCR3

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1  cggggccggg  gtccgagctc  gggcccgcct  ccgcctccgc  cagctcctgt  gagctgccga
61  gtgctaggca  cccgggctct  tctgggggct  ccagaactaa  gccaccaga  caccatcatc
121  tcgaaaaccc  cagcccttct  cccatggcag  gctacttgcc  ccccaaaggc  tacgcccctt
181  cgccccacc  tccctaccct  gtcaccctg  ggtacccgga  gccggcgcta  catcctgggc
241  ccgggcaggc  gccagtgcc  gccaggtag  ctgccccagc  tcccggcttc  gccctcttcc
301  cctcgctgg  ccccggtggc  ttgggggtctg  ctgccccctt  cttgccactg  ccaggggtgc
361  cttctggcct  cgaattcctg  gtgcagattg  atcagatttt  gattcaccag  aaggctgagc
421  gagtggaac  gttcctaggc  tgggagacct  gtaatcggt  tgaactgcgc  tctggggccg
481  ggcagcccct  gggtcaggcg  gccgaggaga  gcaactgctg  cgcccgctcg  tgctgtggcg
541  cccgcgggcc  gctgcgtgtc  cgcttgccg  accccgggga  ccgtgagggtg  ctgcgtttgc
601  tccgcccgt  gcaactgtgg  tgcagctgct  gcccctgtgg  cctccaggag  atggaagtac
661  aggtccacc  aggcaccacc  attggccacg  tgctacagac  ctggcatccc  ttcctcccca
721  agttctccat  ccaggatgcc  gatcgccaga  cagtcttgcg  agtgggtggg  cctgctgga
781  cctgtggctg  tggcacagac  accaactttg  aggtgaagac  tcgggatgaa  tcccgcagtg
841  tgggccgcat  cagcaagcag  tggggggggc  tgggtccgaga  agccctcaca  gatgcagatg
901  actttggcct  acagttcccg  ctggacctgg  atgtgagggt  gaaggctgtg  ctgctgggag
961  ccacattcct  cattgactac  atgttctttg  agaagcgagg  aggcgtggg  cctctgcca
1021  tcaccagtta  gaggccacca  tgggtgtgag  agaccatcac  ctgaccaga  actccagatg
1081  gtcacctgcc  ctggcccctc  ctctgggcag  cccctttcct  ccatgtacac  tgcaggggac
1141  agaagggggg  ccccatccct  accctactcc  ctggccgcct  gcccctgtgg  tcccaagga
1201  ggggtatgta  tgagagccgc  tctcctgcta  cctcccacca  ctgtcccagc  agtccctcgg
1261  cacacaggca  tatcagcttt  cacactttcc  ccatgcactc  tctcccacc  ccttccaggg
1321  cctctgctcc  aaaggaggcc  tctggaacct  aggactctgg  ggttttataa  gagggctggg
1381  gtgtggaagg  gcaagctgca  ccaaagacgg  tggatatagc  caccgcccc  ccgcgctgc
1441  ctagcatctg  cttggccaat  tagttcagcc  tcagaccatg  gcactttgag  ggggtctcta
1501  cctccccatc  aacagctgca  gggggacccc  agtgccaact  tctctccca  ctagggcct
1561  gccttcagct  ggtgcttgct  gcgattcctg  tgccttatgt  aactgcctt  ccttcccttg
1621  ccctagaaa  aaggctgcat  ctttatatgt  tacattcata  taaactttgt  aactttttgg

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Predicted open reading frame:

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MAGYLPPKGYAPSPPPYPVTPGYPEPALHPGPGQAPVPAQVPAPAPGFALFPSPGPVAL
GSAAPFLPLPGVPSGLEFLVQIDQILIHQKAERVETFLGWETCNRYELRSGAGQPLGQAA
EESNCCARLCCGARRPLRVRLADPGDREVLRLRLHCGSCCPCGLQEMEVQAPPGTTI
GHVLQTHWFLPKFSIQDADRQTVLRVVGPCWTCGCGTDTNFEVKTRDESRSVGRISKQW
GGLVREALTDADDFGLQFPLDLDRVKAVLLGATFLIDYMF FEKRGGAGPSAITS

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FIGURE 3

Human PLSCR4

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1  gtttataact  tgaaaaatcc  tctccgtctc  ccttccctgc  ctcccttctc  ttccttttcc
61  tctgccagta  caactagacc  cggcgctctg  cgtccccggg  gccagcatt  ctgcggggca
121  ggcggattaa  ttggaattct  tcaaaatgtc  aggtgtggta  cccacagccc  ctgaacagcc
181  tgcaggtgaa  atggaaaatc  aaacaaaacc  accagatcca  aggcctgatg  ctccctctga
241  atacagttct  ctttttttac  caggaccccc  tggaaacagct  gtccctccac  ctactggcta
301  cccaggaggg  ttgcctatgg  gatactacag  tccacagcaa  cccagtacct  tccctttgta
361  ccagccagtt  ggtgggtatc  atcctgtccg  gtatcagcct  ggcaaatac  ctatgccaaa
421  tcagtctggt  ccaataacat  ggatgccagg  gccaaactct  atggcaaact  gccctctggt
481  tctggaatac  ttagttcagt  tggacaacat  acatgttctt  cagcattttg  agcctctgga
541  aatgatgaca  tgttttgaaa  ctaataatag  atatgatatt  aaaaacaact  cagaccagat
601  gggttacggt  gtaaccgaag  acacagatga  ctttaccagg  aatgcctatc  ggacactaag
661  gcccttcgtc  ctccgggtca  ctgattgtat  gggccgagaa  atcatgacaa  tgcagagacc
721  cttcagatgc  acctgctggt  gcttctgttg  cccctctgcc  agacaagagc  tggagggtgca
781  gtgtcctcct  ggtgtcacca  ttggctttgt  tgcggaacat  tggaaacctgt  gcagggcggt
841  gtacagcatc  caaaatgaga  agaaagaaaa  tgtgatgaga  gttcgtgggc  catgctcaac
901  ctatggctgt  ggttcagatt  ctgtttttga  ggtcaaatcc  cttgatggca  tatccaacat
961  cggcagttat  atccggaagt  ggaatggttt  gttatcagca  atggcagatg  ctgaccattt
1021  tgacattcac  ttcccactag  acctggatgt  gaagatgaaa  gccatgattt  ttggagcttg
1081  cttcctcatg  gacttcatgt  attttgaaag  atctccacca  caacgttcaa  gatagagaga
1141  ccacgaagc  catcaactat  gggttaattt  gaaaaatgga  aaagttggat  tgggcttaca
1201  gtcagcactc  agttatttgc  aagtgtattt  ctttgctttg  tagagtattt  ttattgggtg
1261  ttaactttga  cagctgagag  tgggcttgca  agaacacaat  ctaaaagtgt  gtttcaattg
1321  agtatctctc  tagtagaata  ggagttcatc  ctgaaaagct  gtgactcatt  aaccagtaa
1381  acatatacaa  agtaagctta  aaacactata  aacatgagat  aagggaaaat  gaatccagag
1441  ttctcatatt  aataggtagt  gaaacaataa  ggctttttag  agcagacttt  gttggcataa
1501  aataacctgg  cttctatccc  taaccttttc  ctacctttcc  tctccgtcaa  catgtcctca
1561  tactgaagac  aaacttggtt  caatgatagt  cttcattttt  aaaaacaaaa  aggcaggcag
1621  acagaaataa  tgatgttttc  ttgcactaag  aaggtactac  ttgtacacat  atatcaaaac
1681  ctcatctctg  aaagtttttg  aaggtttcaa  tgggaaattt  gattttatta  caaaataaaa
1741  cattttttta  tgtaaagtt  tatatatccc  atgcttggtt  tctcattcac  tggcatggat
1801  gatcaggagc  tgctatata  tgaaggcaga  atcagactat  caggaaagga  gctggccagg
1861  gccacagcca  gtcaagatct  ctgagcaact  tagagacatt  ggtgtcatta  tatgaagctt
1921  gcatttaata  catttataca  taatacattt  gtacatttaa  ttcataacgt  ctcttggtca
1981  cagatgcctt  atatataaaa  taagttgcca  gatctctaag  attgcctagt  acacctttgt
2041  atctcatttg  atgtgatacc  cagaagagat  cattgttttt  tgtttttgtt  tttgtttttt
2101  tcaagaagat  ccttcgtgat  caccatgctg  ttctcatggt  aagaactgga  gttatgtttt
2161  taaatttgaa  aatatgacat  tttatgtagc  actatataaa  aagtgaaagc  gacaaattcc
2221  accgctgctt  aatactgctt  tgcttctttt  tattgacatg  atagatacat  atgtatctac
2281  acagagtaat  aataataaaa  cacagtaaac  attctatttc  tctatggtct  acagcatgcc
2341  agtaaataat  atgtaggacc  aataataaat  tatcaattac  acatttttgt  gttaactaat
2401  taaaagcata  gtgtataagt  gagtacactc  taattaactt  gcttctgttg  cactttagtt
2461  ttctacctgc  atatggactg  catttttttt  tttaacacag  tcagtatgta  gaatgggatg
2521  tattcttctg  ctgctgctta  ttaaataaag  aaagcctgag  tgttcttaga  tggggttatt
2581  ctgagatgag  ggtccttagcc  tacagtctct  tttgaaatga  aaggtgcttt  gtttttaatt
2641  tatattcatc  ttttcagggt  aaattgtgtt  ttctgagttt  ctcgtaatgc  tcttttttac
2701  atgctgtcac  tagctttttt  ttttaaaaaa  agtaaaagtt  gctgctttct  aaaatattaa
2761  ttgccttata  tttgaaagtg  ccattgcaat  cgtaagtaga  ctatgtattt  cctataatga
2821  tgtctgatat  ttaaataagga  aatcagacaa  acaatattca  gaaagttaa  gcatataaac
2881  tttttatttt  taacttgctt  agatccctgt  attccaaaac  ctgctgcac  ataataaata
2941  tatctatata  tatttagcat  aagacgtgat  atttttaatt  tcttttttaa  aaaattatat
3001  ttgtctctta  gagttaaaat  tttctttata  taatattgtc  atatgtcata  gttttaatac
3061  aattcacatg  atttctatgt  ttcttaatga  tattttgttg  tgtaaaattg  atcggattga
3121  ttaaaaaaca  aattctctgg  aattgtgctg  ttcatgcttt  ttcgtattct  ttatggcttt
3181  taaataaata  tacaatgggt  aatagt

```

FIGURE 4A

Predicted open reading frame:

MSGVVPTAPEQPAGEMENQTKPPDPRPDAPPEYSSHFLPGPPGTAVPPPTGYPGGLPMGY
YSPQQPSTFFPLYQPVGGIHPVRYQPGKYPMPNQSVPITWMPGPTPMANCPPGLEYLVLQLD
NIHVLQHFEPLEMMTCFETNNRYDIKNNSDQM VYVVTEDTDDFTRNAYRTL RPFVLRVTD
CMGREIMTMQRPFRCTCCCFCCPSARQELEVQCPPGVTIGFVAEHWNL CRAVYSIQNEKK
ENVMRVRGPCSTYGCGSDSVFEVKSLDGISNIGSIIRKWNGLLSAMADADHFDIHFPLDL
DVKMKAMIFGACFLIDFMYFERSPPQRSR

FIGURE 4B

Mouse PLSCR1

```

1  gggcagagct  cgcgtcattc  agagtgagtc  ccctctgcga  gggaaagccg  ggctactgca
61  ggcgccaccag  caagggattg  ggactcacgg  acttcagaac  agaaggagcc  tcagaaactg
121  tttaaatcat  ggaaaaccac  agcaagcaaa  ctgaggctcc  ccaccgggga  acatatatgc
181  cagctgggta  tccccctccg  tatccaccag  cagctttcca  aggaccttca  gaccatgctg
241  cttaccccat  accccaggct  ggctaccaag  ggcctccggg  cccctatcca  gggccccaac
301  ctggctaccc  agtcccacca  ggaggttatg  cagggtggtg  ccctagtggc  tttcctgtcc
361  aaaatcagcc  agcatataat  catccagggt  ggcctggggg  gaccccatgg  atgccagccc
421  cccctcctcc  actgaactgt  ccaccggggc  tggaaatact  agctcagatt  gatcagcttc
481  tggttcatca  gcaaattgag  cttctggaag  tcttaacagg  ctttgaaaca  aataacaaat
541  atgaaatcaa  gaacagcctc  gggcagagag  tttactttgc  agtgggaagat  actgactgct
601  gtacccgaaa  ctgctgtggg  gcgtctagac  ctttcacctt  gaggatcctg  gataatctgg
661  gccgagaagt  catgactctg  gagagacctc  tgagatgcag  tagctgctgc  tccccctgct
721  gcctccagga  gatagaaatc  caggetcctc  ctgggggtacc  agtaggttat  gtgactcaga
781  cctggcaccc  atgtctgccc  aagtctactc  tccaaaatga  gaagaagcag  gatgtcctga
841  aagtagttgg  tccgtgtgtt  gtgtgtagct  gctgttccga  cattgacttt  gagctcaaat
901  ctctagatga  agaatcagta  gttggcaaaa  tttctaagca  gtggtctggt  tttgtgagag
961  aggccttcac  ggatgcagac  aattttggga  tccagttccc  gctagacctg  gatgtgaaga
1021  tgaaagctgt  gatgcttggt  gcttgtttcc  tcatagattt  catgtttttt  gaaagaactg
1081  gaaacgagga  gcaaagatca  ggagcatggc  agtaactccc  tgagagttct  tgaggtttaa
1141  ggacgacaac  tttatggacc  ctgaatggaa  actgaggaat  cacaaggcac  acaccgtggc
1201  ttcttttctt  ttactgaaat  aactttctat  caactcacct  gtgatgacct  ggtgccctgt
1261  tgtacaatta  tgctcccaaa  ttagagttta  ttttttagaa  ttctgtcatg  tatttgtttt
1321  tatacattct  taaggttttc  actgtgaatt  tgggaaaaca  gttatgtgaa  tttatataca
1381  tagaaatgat  cttctctatg  aaaacatact  ttgactttgt  ctttcgtttc  ccatttttgt
1441  ggaaacgtaa  atgctattgt  aatttaatat  aaaattacac  attaaatata  attatgattt
1501  ac

```

Predicted open reading frame:

```

MENHSKQTEAPHPGTYPAGYPPPYPPAAAFQGPSDHAAYPIPQAGYQGPPGPYPGPQPGY
PVPPGGYAGGGPSGFPVQNQPAYNHPGGPGGTPWMPAPPPPLNCPGLEYLEAQIDQLLVH
QQIELLEVLTFGETNNKYEIKNSLGQRVYFAVEDTDCCTRNCCGASRPFTLRILDNLGRE
VMTLERPLRSCSCCFPCCLQEIEIQAPPGVPVGYVTQTWHPCLPKFTLQNEKKQDVLKVV
GPCVVCSCCSDIDFELKSLDEESVVGKISKQWSGFVREAFDADNFGIQFPLDLVDVKMKA
VMLGACFLIDFMFFERTGNEEQRSQAWQ

```

FIGURE 5

Mouse PLSCR2

```

1  tctaaagact caggaaacaa aacctaaatt gcctcaaagt tcaggtgctt tttctccctg
61  acttttagtct agtggagtag tgcagcacct atgcctttct gagaggagtc tggagagctg
121 agtcgctgct ggtgctagga ttctaggaat tcgcctcact tggagctgca tgagaaaaga
181 aaggcttgca aatggaggct cctcgctcag gaacatactt gccagctggg tatgccctc
241 agtatcctcc agcagcagtc caaggacctc cagagcatac tggacgcccc acattccaga
301 ctaactacca agttccccag tctggttate caggacctca ggctagctac acagtctcaa
361 catctggaca tgaaggttat gctgctacac ggcttcctat tcaaaataat cagactatag
421 tccttgcaaa cactcagtgg atgccagcac caccacctat tctgaactgc ccacctgggc
481 tagaatactt aaatcagata gatcagcttc tgattcatca gcaagttgaa cttctagaag
541 tcttaacagg ctttgaaaca aataacaaat ttgaaatcaa gaacagcctc gggcagatgg
601 tttatgttgc agtgggaagat actgactgct gtactcgaaa ttgctgtgaa gcgtctagac
661 ctttcacctt aagaatcctg gatcatctgg gccaaagaag catgactctg gagcgacctc
721 tgagatgcag tagctgctgc ttccctgct gcctccagga gatagaaatc caggctcctc
781 cgggggtgcc aatagggttat gtgactcaga cctggcacc atgtctgcc aagctcactc
841 ttcagaacga caagaggag aatgttctaa aagtagttgg tccatgtgtt gcatgcacct
901 gctgttcaga tattgacttt gagatcaagt ctcttgatga agtgactaga attggttaaga
961 tcaccaagca gtggtctggt tgtgtgaaag aggccttcac ggattcggat aactttggga
1021 tccaattccc gctagacctg gaggtgaaga tgaaagctgt gacgcttggg gcttgcttcc
1081 tcatagatta catgtttttt gaaggctgtg agtaggaaca gaaatccgac ctgcagtagg
1141 aatcaatgaa agaggacaga gaagatctga agtctacaca aggagatcat atgattgaga
1201 gacctggggc tttttgattt cttcattgaa atttctcaga atcaagctgt tatacatgaa
1261 gcatagtatg taacattttg gttttcaaat ggtagtttat cttttacatt attggaatag
1321 acctggataa ttatctttat acacttctaa aaatatgcac caaattcaag ttaaaaaaaaa
1381 aaagacgaag agaagtgtat gttttaaaat aaaacatttt atggaaaagt aagttaaatc
1441 ataatctggg atttattttt catcttttgt tcaatttaaa ccttgtagt gctgatttta
1501 ttataaaaatt gtactttact atcaaacct gttagtttat ttcttacaga aatcctccta
1561 ttattttgaa attacatatt tttgaaagct ttttaaaaga tactattgcc tgggaaattc
1621 ta

```

Predicted open reading frame:

```

MEAPRSGTYLPAGYAPQYPPAAVQGPPEHTGRPTFQTNYQVPQSGYPGPQASYTVSTSGH
EGYAATRLPIQNNQTIIVLANTQWMPAPPPILNCPGLEYLNQIDQLLIHQVELLEVLTG
FETNNKFEIKNSLGQMVYVAVEDTDCCTRNCCEASRPFTLRILDHLGQEVMTLERPLRCS
SCCFPCCLQEIEIQAPPGVPIGYVTQTWHPCLPKLTLQNDKRENVLKVVGPCVACTCCSD
IDFEIKSLDEVTRIGKITKQWSGCVKEAFTSDSNFGIQFPLDLEVKMKAVTLGACFLIDY
MFPEGCE

```

FIGURE 6

Mouse PLSCR3

```

1  cccccgagtct taggtgccgc cctagagacc ctggggcccg actggggcgca gctacctctt
61  cgcctctgcc tgctcgtctt tgtttctgtg tctgtctagc tgttcccgag cttgtcccac
121 tccagaacta agtctcccc acgccaaaag cccaagactc cctcctgat tcccatggca
181 ggctacttgc cccccaaagg ctatgccctt tcacccccac ctcctaccc cgtgccatct
241 gggatatccag agccgggtggc tctgcatcct ggaccgggac aagctccagt gccacccag
301 gtgcctgcc ctgctcccg cttcgtcttc tccccctcgc caggcccagt ggctccaggg
361 cctcctgctc ctttcgtgcc attgccaggg gtgcctcctg gcctcgaatt cctagtgcag
421 attgatcaaa tcttgattca tcagaaggct gaacgagtgg aaacgttcct aggctgggag
481 acctgtaata tgtatgaact tcgctccgga accggacagc aactgggtca ggcagctgaa
541 gagagcaact gttgtgccc cctgtgctgt ggtgcccgc gaccatttcg aatccgccta
601 gcggaacctg gggaccgcga ggtgctccgg ctccctccgc cacttcattg tggtgcagc
661 tgctgcccc gtggtcttca ggagatggaa gtccaggctc cacctggcac caccattggc
721 catgtgctac agacctggca tcccttcctt cctaagtttt ccctcctgga tgctgatcgc
781 caacctgttc tacgagttgt agggccttgc tggacttgtg gctgtggtac agacaccaac
841 tttgaggtga agactaagga tgaatcgca agtggtggcc gcatcagcaa gcagtgggga
901 gggctgctcc gagaagccct cacagatgcc gatgactttg gcctccaatt cccagtcgat
961 ctagatgtga aagtgaaggc cgtactgctg ggagccacgt tcctcatcga ttatatgttc
1021 ttcgagaaga gaggaggcgc aggacctct gccatcacca gttagaagcc acctcaggat
1081 gaggagacct atctccttga ccagaattta agatggtcag ctgcccctgga cgttccctcc
1141 tgaagcaacc ctttccttga tatacactgc ggcgaccga cgagggtggc cgagtgggtg
1201 ggagccgttg tgtcccatcc cttccctgct tctcctgtgg cctgcagaa gagcatgtat
1261 gagacctgtt cctccttctg ttcaccatct ccaggcagt cctgtgcaca cattagcttt
1321 taaacttcct tgcacactcc ttcagcctt cctctggggc ctctgcatag gcaggggcat
1381 ctggaatcct ggactcaagt tttacccag ggcttgtggg taaaaggcaa gcagtaccaa
1441 agatggcaga caccacctt cccttatggc acttagcca attagtttag cttccgattg
1501 tggcactctg aggggatcct tgccctcctc ctaatagctg tagcggttgg gccccagtgc
1561 caactcccta agccccctgg ccctgcgggt gctttctgca gcttctgtg cttattttaa
1621 ccgttaacct cttccttccc ctactgtagg aaggaggctg tgtctttgta tgtgtactc
1681 atataaactt tgaactttt taaacagt

```

Predicted open reading frame:

```

MAGYLPPKGYAPSPPPYPVPSGYPEPVALHPGPGQAPVPTQVPAPAPGFALFPSGPVPA
PGPPAPFVPLPGVPPGLEFLVQIDQILIHQKAERVETFLGWETCNMYELRSGTGQQLGQA
AEESNCCARLCCGARRPFRIRLADPGDREVLRLRLPLHCGCSCCPCGLQEMEVQAPP GTT
IGHVLQTWHPFLPKFSILDADRPVLRVVGPCWTCGCGTD TNFEVKTDESRSVGRISKQ
WGGLLREALTDADDFGLQFPVDLDVKVKAVLLGATFLIDYMF FEKRGGAGPSAITS

```

FIGURE 7

Mouse PLSCR4 (partial sequence)

```

1  cagatgactt taccaggaat gcctatcgga acctacgacc ctttgtgctc cgggtcactg
61  actgcctggg ccgagagatc atgaccatgc agaggccttt ccgatgcacc tgctgttgct
121 tctgctgccc ctgtgcaaga caagagctgg aagtgcaatg tcctcctggg gtcaccattg
181 gctttgttgc agaacactgg aacttgtgca gagcctctta tagcatccag aatgagaaga
241 aagagagtat gatgagagtg aggggtccgt gtgcaacctc cggctgtggc tccgattctg
301 tttttgagat caactctcta gatggcgtgt ctaacatcgg cagtattata aggaagtgga
361 atggcctttt atcaacgatg gtaaagtctg accactttga gattcgcttc cctttggccc
421 tggatgtgaa gatgaaagca atgattttcg gctcttgctt cctcattgac ttcattgtact
481 ttgaacgacc tcctccgcga cgtatgtcaa gatagaggat caaacaatc atcaattgaa
541 aaaaaatgag taatttgcac tcagcttatg tatagctttc tgttattagc acatatattt
601 ctctggcttg acatgtgtct cagttgagta tttagcttct tgaggcacta ggttattctg
661 aaatctctac tccattagcc aaataaacat atacagatac aagcattaca gctataggca
721 tgtgagctat gggaaagtga aacccttggt tctcaacttg acaggtcaca acacatcttc
781 tgtncctgtc cctttcttct tcattaggaa aaacttgatt ccaggtgaga ggactgctac
841 tcttagtctt catcttttag agccaaaaag tgcacagaaa taatgtgctt taatgtgctc
901 agaaaatggt ttgtgtgtgt gtgtgtgtct gtgtgcacca gaacatcatt ctgcaacatg
961 catacaagtt cctaaagttc tcagtgggga attttatttt attacaaaat aaaatgtatt
1021 ctctttatag gcagtttata ttttctatgc atatttcttc ataccctcaa ctgggcaatg
1081 tggagctacc tgtatatgaa ggtaggatga gggtagcagg gaaagttgat cagagctaca
1141 gccaaataag ttcttggcat cttacacatg ttgtgtgttt gcttactcag caaaattagt
1201 gtggactctc gtattttacac ttgcctttta tctaactgtt tatactgatg tctggaatta
1261 cctattgtat ttttgtatct cacttgctat tttttttttt ttcgaaatcc atctaataac
1321 caggatgtcc ttgtgaccaa cagtttatta aagctgaata tgtaaatcct gtcattgctt
1381 taatactggt gacgctttgc gtggtaaaca actcattata tgcaatcagt aagaagacac
1441 agtaaatttg ttgcttccat attttctcca gattatcaat gaggactatg gaagaccagc
1501 agacttgtag taaggacagt gtatgtatga atcactgatt taattaatga gtttcatgcc
1561 tttgctgtcg acctacacat agatgctgta tgggtttttt ttttaatgga tatattctct
1621 tanagtttat ttaaaaagga ttaagtgtc ttgggttgaa ttatcctgag agaagagatg
1681 tagccaacag gcctttttga aatagcagg gcttcagctt taattatact aatgttttta
1741 tgagaaagat tgttctcttc agttatctac ttgctgctgt tgagttttta tttaaaaaaa
1801 atcatgagtt cttgactaaa aactacctta aatgttaaaa tgtacctcta attttaacca
1861 gacatacatg atttctgtat gacatcttgt attttgcata taaaccagat aaacagaatt
1921 ctgagagctc acgtataagc ctgtcctttg cccaccacca cccattctta gcactttgca
1981 tcacgttgat agtgaaagtc agaatgcttc atatttctgt gctccatact tcagtgttca
2041 tgatgctaata acttctctaa cagcagaatt ctttaacata agtcatgcaa tttctgtaac
2101 gcagtagaat ttcactgtat caagacagcc tacttaacta aaaaataaac aacttgtttt
2161 ct

```

Predicted open reading frame (partial, 5' end missing):

```

DDFTRNAYRNLRPFVLRVTDCLGREIMTMQRPFRCTCCCFCCPCARQELEVQCPPGVITG
FVAEHWNLCRASYSIQNEKKESMMRVRGPCATYGCSDSVFEINSLDGVSNIGSIIRKWN
GFLSTMVNADHFEIRFPLALDVKMKAMIFGSCFLIDFMYFERPPPRMSR

```

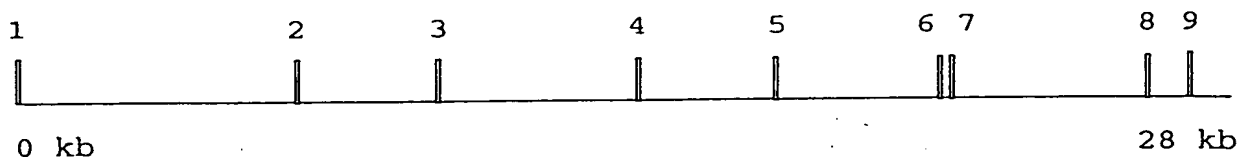
FIGURE 8

FIGURE 9

MU PLSCR1 328 aa; HU PLSCR1 318 aa

	10	20	30	40	50	60
Mouse	MENHSKQTEAPHPGTYPAGY	PPYP	PAAFGQPSDHAAYPI	QAGYQGPPGYP	PGPQPGY	
Human	MDKQNSQMNASHPETNLPVGY	PPQY	PPTAFQGP	-----P--GYSG--	YPGPQVSY	
	10	20	30		40	
	70	80	90	100	110	
Mouse	PVPPGGYAGGGPSGFPVQNQPAYNHPG	-----GPGGT	PWMPAPPPPLNCPPGLE	YLAQID		
Human	PPPPAGHSGPGPAGFPVFNQPVYNQPVY	QPVYGAAGVFWMPAPQ	PPLNCPPGLE	YLSQID		
	50	60	70	80	90	100
	120	130	140	150	160	170
Mouse	QLLVHQQIELLEVLTGFETNNKYEIKNSL	QQRVYFAVEDTDCCTR	NCCGASRPFTLR	IILD		
Human	QILIHQQIELLEVLTGFETNNKYEIKNSF	QQRVYFAAEDTDCCTR	NCCGPSRPF	TLRIID		
	110	120	130	140	150	160
	180	190	200	210	220	230
Mouse	NLGREVMTLERPLRCSSCCFPCCLQEIEI	QAPP	PGVPVGYVTQTWHPCLPKFTLQNEKKQD			
Human	NMGQEVITLERPLRCSSCCCPCLQEIEI	QAPP	GPVPIGYVTQTWHPCLPKFTIQNEKRED			
	170	180	190	200	210	220
	240	250	260	270	280	290
Mouse	VLKVVGPCVVCSCCSDIDFELKSLDEESV	VVGKISKQWSGFVREAF	TADNFGIQFPLDLD			
Human	VLKISGPCVVCSCCGDVFDFEIKSLDEQ	CVVGKISKHWTGILREAF	TADNFGIQFPLDLD			
	230	240	250	260	270	280
	300	310	320			
Mouse	VKMFAVMLGACFLIDFMFFERTGNEEQ	RSGAWQ				
Human	VKMFAVMIGACFLIDFMFFESTGSQEQ	KSGVW-				
	290	300	310			

FIGURE 10



cgagcgcagcgcgggaaccgggaaaaggaaaccgtgtgtgtacgtaagattcaggaaa
 cgaaaccaggagccgcgggtgttggcgcaaagggttactcccagaccctttccggctgac
 ttctgagaagggttgccgcagcagctgtgcccagacagtctagaggcgcagaagaggaagcca
 tcgcctggccccggctctctggaccttgtctcgctcgggagcggaaacagcggcagccag

↓ Exon 2 ↓ Exon 3
 agaactgttttaatcatggacaaacaaaactcacagatgaatgcttctcaccggaaaca
 M D K Q N S Q M N A S H P E T

↓ Exon 4
 aacttgccagttgggtatcctcctcagtatccaccgacagcattccaaggacctccagga
 N L P V G Y P P Q Y P P T A F Q G P P G

tatagtggctaccctgggccccagggtcagctacccacccccaccagcggccattcaggt
 Y S G Y P G P Q V S Y P P P P A G H S G

cctggcccagctggctttcctgtcccaaatacagccagtgataatcagccagtatataat
 P G P A G F P V P N Q P V Y N Q P V Y N

cagccagttggagctgcaggggtaccatggatgccagcgcacagcctccattaaactgt
 Q P V G A A G V P W M P A P Q P P L N C

↓ Exon 5
 ccacctggattagaatatttaagtcagatagatcagatactgattcatcagcaaattgaa
 P P G L E Y L S Q I D Q I L I H Q Q I E

↓ Exon 6
 cttctggaagttttaacagggttttgaaactaataacaaatatgaaattaagaacagcttt
 L L E V L T G F E T N N K Y E I K N S F

ggacagagggtttactttgcagcgggaagatactgattgctgtacccgaaattgctgtggg
 G Q R V Y F A A E D T D C C T R N C C G

ccatctagaccttttaccttgaggattattgataatatgggtcaagaagtcataactctg
 P S R P F T L R I I D N M G Q E V I T L

↓ Exon 7
 gagagaccactaagatgtagcagctgttgtgtgtccctgctgccttcaggagatagaatc
 E R P L R C S S C C C P C C L Q E I E I

caagctcctcctgggtgtaccaatagggttatgttattcagacttggcaccatgtctacca
 Q A P P G V P I G Y V I Q T W H P C L P

aagtttacaattcaaaatgagaaaagagaggatgtactaaaaataagtgggtccatgtgtt
 K F T I Q N E K R E D V L K I S G P C V

↓ Exon 8
 gtgtgcagctgttgtggagatgttgattttgagattaaatctcttgatgaacagtggtg
 V C S C C G D V D F E I K S L D E Q C V

gttggcaaaatttccaagcactggactggaattttgagagaggcatttacagacgctgat
 V G K I S K H W T G I L R E A F T D A D

aactttggaatccagttcccttttagaccttgatgttaaaatgaaagctgtaatgattgggt
 N F G I Q F P L D L D V K M K A V M I G

↓ Exon 9
 gcctgtttcctcattgacttcatgttttttgaaagcactggcagccaggaacaaaaatca
 A C F L I D F M F F E S T G S Q E Q K S

ggagtgtggtag
 G V W -

FIGURE 11

-150	AGTTTCCTCTCCTTAACCACCGGACAAACGTCTCTGGAGTCTCTCCAATG	-101
	CCAAT box	
-100	AGCAAGAAAGCAAGTCGGGGGTAGGGGAGGGGCCTCACACCAGGGGGTGG	-51
	GC box GC box	
-50	GCGCAGTCCCTCCTCCAGCTCCTTCACCCTCCAGTAGTCTCGTGGGTCCC	-1
	AP4 USF	
+1	CGAGCGCCAGCGCGGGAACCGGGAAAAGGAAACCGTGTGTGTACGTAAG	+50
	AP4 ETS1 ISRE; IRF	
+51	ATTCAGGAAA	

FIGURE 12

HuPLSCR1	1	-----MDKQNSQW	NASHPETN	LPVGYPP	QYPPETA	QGPFGYS	GYPGP
HuPLSCR2	1	-----	-----	-----	-----	-----	-----
HuPLSCR3	1	-----	MAGY	LPKGYAP	SPPP	PVTPGYP	-----EP
HuPLSCR4	1	MSGVVPTAPEQ	PAGEMENQ	TKPPDPR	BDAPP	YSSHFL	LEGPPGTAVPPT
HuPLSCR1	43	QVSYPP	FPAGHSGPGPA	GFPVPNQ	PVYNQ	QFV	-----GAAGMPWM
HuPLSCR2	1	-----	-----	-----	-----	-----	-----M
HuPLSCR3	28	-----	ALHPGPGQA	PVPAQV	PAPAPG	FALEPSP	-----GPVALGSA
HuPLSCR4	51	GYPGGLE	MGYYSPQ	QPS	TEFLYQ	EVGGI	HBVRYPQ
HuPLSCR1	87	PAPQ	PPLNCP	PGLEYLS	QIDQ	ILTHQ	QTELEVL
HuPLSCR2	2	PAPQ	PPLNCP	PGLEYLS	QIDM	ILTHQ	QTELEVL
HuPLSCR3	64	APFL	PLPGVPS	GLEYLV	QIDQ	ILTHQ	KAERVET
HuPLSCR4	101	FGTE	MANCP	PGLEYLV	QIDN	IHVLQ	HFEPEL
HuPLSCR1	137	QRYFAA	EDTD	CCTR	NCCGP	SRPF	TLRI
HuPLSCR2	52	QRYFAA	EDTN	CTRN	CCGR	SRPF	TLRI
HuPLSCR3	114	QPLG	QAABESN	CCAR	CCGAR	RPLRV	LADP
HuPLSCR4	151	QMVY	VVTE	DDT	TRNA	YRTL	LRPF
HuPLSCR1	185	CCPC	CLQEI	EQAPP	GVPL	IGYV	IQTWH
HuPLSCR2	100	CCPC	CLQEI	EQAPP	GVPL	IGYV	IQTWH
HuPLSCR3	162	CCPC	GLQEME	VQAPP	GTIG	HVLQ	TWHPE
HuPLSCR4	201	CCPS	ARQ	QELV	QC	PPGV	TIGF
HuPLSCR1	235	VVCS	CCG	DVDFE	IKSL	DEQC	VVGK
HuPLSCR2	150	IVCS	CIAG	VDFT	ITSL	DEQI	IVGR
HuPLSCR3	212	WTCC	CGT	DTN	FEVK	TRDES	RSVGR
HuPLSCR4	251	STYG	CGS	DSV	FEVK	SLD	GISN
HuPLSCR1	285	LDVK	KAVN	IGAC	FLID	F	MEFE
HuPLSCR2	200	LDVK	KAVN	IGAC	FLID	F	MEFE
HuPLSCR3	262	LDVR	KAVL	L	GAT	F	LIDY
HuPLSCR4	300	LDVK	KAMIF	GAC	FLID	F	MEFE

FIGURE 13